edges fringed with fleshy ciliate lobes. These bristles lacking on the rentral surface, except for a short distance from both anterior and posterior ends. Ilooklets of cremaster . 08 mm . in length, long and slender, their stems equal, but expanded at extremities into mushroom-like sancers, . 04 1mnn. across; in color rather bright reddish brown.

Spiracles elongate oval, elevated, white, with a rather sharp concolorons ring, .12 mm . in length, .06 mm . across; to the naked eve with an aureous tinge. Basal wing prominences low, broadly rounded elevations, glistening white, . 12 1mn. in height and of the same diameter at base.

Color of thorax, grass green; of abdomen, yellow green. Wing cases pale crean colored, with some blackish fuscous streaks on onter borders. Tongue case infuscated with weak, brownish streaks. Tongue and antemal cases outlined in weak brown. A fine black dorsal streak, on thoracic segments heavier than abdominally, and on abdominals containing a rather heavy point. At point of junction of thorax and abdomen the dorsal line slightly enlarged, and on either side of it here, laterally on mesothorax, a rather long, wavy, black streak. On first thoracic, on either side of dorsal line, a fine black point. Suprastigmatally, on abdominal segments, in line with wavy streaks of mesothorax, a weak series of brown points, two to a segment in an oblique row. Retween dorsal line and lateral points of abdomen, a subdorsal series of very weak black points, almost obscure, one to a segment placed posteriorly.

Length, 10.5 mmm . Greatest width of thorax, 4. 1mm.; greatest width of abdomen, 4.50 mm . Greatest height of thorax, 4. mm.; greatest height of abdomen 3.75 mm .

## New Thysanoptera from the United States.

By J. Douglas Hood, University of Rochester.
(The types of the new species described below are in the author's collection).

Sericothrips nubilipennis sp. nov.
오 (macropterons).-Length about 1 mm . Color nearly miniform pale yellow, with a pair of large brown spots at center of prothorax and another somewhat smaller pair on metascutum: antennæ concolorous with body, excepting sides of 2 , which are slightly darkened, and distal two-fiftles of 4, distal half of 5 , and all of $6-8$, which are dark blackish brown ; fore wings nearly miform dark hlackish brown, slightly paler at
extreme tip, just beyond scale, and also along anterior margin in basal fifth; legs concolorous with body ; ocellar pigment deep red.

Head about 1.7 times as wide as long, about as broad across eyes as behind them, surface without noticeable sculpture, bristles as usual in the genus. Eyes rather large and romnded, equal in width to their interval, pilose. Antenna about three times as long as head. Mouth cone only slightly surpassing base of prosternum.

Prothorax decidedly longer than head and about 1.7 times as wide as long, sides broadly rounded ; pronotum with the usual, raised, anastomosing, transverse lines and with the single large bristle at posterior angles straight, pale, and not prominent. Fore wings with all bristles dark in color and readily visible; costal margin with 26 bristles; principal vein with a basal group of three, then with 20 , the last one rather more widely separated than the others; posterior vein indicated by two widely spaced bristles near tip of wing: hind wings with dark median line except at tip and base.

Abdomen rather slender but distinctly wider than pterothorax, without color markings of any kind ; sides with the usual pubescence, which is missing from median portion : all bristles slencler, pale, and very inconspicuous.

Measurements of holotype: Length 1.00 mm . ; head, length about 0.084 mm ., width 0.143 mm .; prothorax, length about 0.107 mm ., width 0.180 mm .; pterothorax, width 0.225 mm .; abdomen, width 0.255 mm .; fore wings, length 0.690 mm .; width at middle, 0.030 mm . ; near base, 0.060 mm .

| Antennal segments |  | 2 | 3 | 4 | 5 | 6 | 7 | 8 |  |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Length (microns) | $\ldots$ | 21 | 36 | 42 | 43 | 40 | 46 | 10 | 13 |
| Width (microns) $\ldots$. | 24 | 26 | 19 | 18 | 17 | 16 | 7 | 5 |  |
| Total length of antena, 0.25 mm . |  |  |  |  |  |  |  |  |  |

Described from one female taken by Mr. W. L. Me Atee, of the U. S. Biological Survey, and the writer at Plummer's Island, Maryland (in the Potomac River above Washington, D. C.), from willow, October 5, 1913.

A very pretty and unusually colored species, easily known by the dark wings.
Sericothrips sambuci sp. nov.
of (macropterous).-Length about $1.1 \mathrm{mm1}$. Color uniform pale yellow, nearly white, without body markings of any sort; antenne light gray, with segment 1 nearly clear white, 2 somewhat infuscate, 4 dark gray in distal third, 5 dark gray in distal
half or more, and 6-8 nearly uniform dark gray; wings with veins and fringes slightly yellowish, otherwise colorless except for a very light shading at basal third; legs concolorous with body; ocellar pigment bright red.

Head about 1.75 times as wide as long, somewhat broader across eyes than behind them, surface without noticeable sculpture. bristles as usual in the genus. Eyes relatively small, rounded, widely separated, only a little more than half as wide as their interval, pilose. Antennæ about three times as long as head, segments as usual in this group of the genus. Mouth cone short, not at all prominently tipped with black, barely attaining base of prosternum.

Prothorax decidedly longer than head and about 1.5 times as wide as long, sides broadly rounded: pronotum with the usual raised, anastomosing, transverse lines and with the single large bristle at posterior angles nearly straight and colorless. Fore wings with all bristles pale in color and inconspicuous: costal margin with about 26 bristles ; principal vein with a basal group of three followed by about 20, the distal one or more rather widely separated; no additional bristles in a sècond series at tip of wing; hind wings without median dark line.

Abdomen rather slender, but decidedly wider than pterothorax, without color markings ; sides with the usual pubescence, which is missing from median portion; all bristles slender, pale, and very inconspicuous.

Measurements of holotype: Length 1.13 mm. ; head, length $0.090 \mathrm{~mm} .$, width 0.158 mm . ; eyes, length 0.054 mm. . width 0.041 mm ., interval 0.075 mm . ; prothorax, length 0.123 mm ., width 0.180 mm . ; pterothorax, width 0.255 mm . ; abdomen. width 0.315 mm . ; fore wings, length 0.750 mm ., width at middle 0.036 mm ., greatest subbasal width 0.075 mm .

| Antennal segments |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Length (microns) | $\ldots$ | 18 | 39 | 52 | 50 | 43 | 51 | 12 | 15 |
| Width (microns) | $\ldots$ | 26 | 28 | 22 | 20 | 20 | 17 | 8 | 6 |

Total length of antenna, 0.28 mm .
Described from five females taken by Mr. W. L. Mc Atee and the writer at Bladensburg, Maryland, September 7 and 20, 191.3. from the under surface of leaves of Sambucus canadensis $L$. Larve were abundant at the time.

For more than ten years this species has been in my collection, but I have hesitated to describe it because of its evident close relationship to $S$. albus Jones, a Californian species described from specimens taken on Sambucus and weeds. The
present insect differs decidedly from albus, however, in having a much shorter and more blunt mouth cone, which is not prominently tipped with black. 111 albus this structure is slender and acutely prolonged at the tip, reaching well onto the mesosternum.

## Neurothrips gell. nov.

Depressed, dull above, glabrous beneath. Head not elongate, decidedly swollen behind eves, somewhat narrowed at base, cheeks with prominent, bristle-bearing tubercles; vertex with a deep vertical groove, anterior ocellus directed forward; eyes large, closely facetted. Fore femora enlarged in both sexes, often with a large subapical tooth as in Acanthothrips; fore tarsi strongly armed in both sexes. Wings of both pairs broad in basal fourth, apical three-fourths abruptly and decidedly narrowed, with sides parallel; median vein prominent in both fore and hind wings, extending nearly to tip. Abdomen with a narrow, but deep, longitudinal dorsal furrow for the reception of the wings. Terminal bristles longer than tube.

Genotype: Acanthothrips magnafcmoralis Hinds.
Though related to Acanthothrips, this genus is abundantly distinguished by the character of the wings, and the presence of an abdominal groove for their reception. Two species, one of which is undescribed, are known to the writer.

The species of this genus are remarkable for the coloration of their dorsal surface-a pleasing combination of bright red, black, and snow-white into a sequence of spots so intricate and involved as to defy description. The appendages and the tip of the abdomen are ringed with black and pale yellow. They are prowlers, living on the trunks and branches of trees, where their coloration blends them well into their enviromment and makes them difficult indeed to detect.

## Elaphrothrips parallelus sp. nov.

오 (macropterous). -Length about 3.4 mm . Color dark blackish brown or black, darkest in last three or four abdominal segments; trochanters, both ends of fore tibice, and fore tarsi, somewhat paler: segment 2 of anteme yellowish in apical half, except inner surface which is concolorous with basal part of segment ; segment 3 yellow, infuscate at extreme apex; 4 yellow in basal two-thirds: 5 yellow in hasal two-fifths; remainder of antenna blackish brown ; wings of both pairs entirely colorless.

Head about 2.8 times as long as greatest width, narrowest just behind eyes, widest at basal third, and with a short, collarlike widening at extreme base, just behind a distinct constriction ; vertex conical, produced, apex attaining base of antemme but not surpassing the frontal costa, which is distinctly notched between antemx; dorsal and lateral surfaces finely striate. sparsely set with short, subequal, inconspicuous bristles ; interocellar bristles long, but shorter than postoculars, both pairs pointed. Eyes somewhat more than one-sixth as long as head. distinctly flattened at sides, distance across them less than greatest width of head. Ocelli small; anterior ocellus occupying extreme vertex ; posterior ocelli distinctly in advance of center of eyes. Antemnr slender, eight-segmented, about 1.25 times as long as head, of the usual form and structure, except that segments 5 and 6 are obliquely truncate at apex; segments 3-5 clavate ; 6 and 7 pedicellate ; 8 lanceolate, pedicellate, shorter and stouter than usual, less than three times as long as greatest width. Mouth cone short, broadly rounded, reaching somewhat beyond middle of prosternum.

Prothoras about one-third as long as head and (inclusive of coare) about 2.3 times as wide as long, median thickening distinct, surface with a few faint lines of sculpture; usual bristles all present, the outer pair at posterior angles much the longest but distinctly shorter than postoculars, others subequal to coxal. Pterothorax subrectangular, longer than wide, slightly narrower than prothorax across coxæ. Wings clear and colorless, of nearly equal width throughout, fore pair with about 20 accessory hairs on posterior margin near apex. Legs slender: fore tarsi with a short, acute, hooked tooth whose point is directed forward on a line parallel to the tarsus.
Abdomen slender, very little wider than pterothoras. Tube markedly short and stout, only 0.56 as long as head and only three times as long as basal width, less than half as wide at apex as at base, sides slightly convex, free from any noticeable bristles. Abdominal bristles pale yellowish, those on segment 9 surpassing tip of tube; terminal bristles five-sixths the length of tube.

Measurements of holotype: Length 3.38 mm .; head, length 0.690 mm ., greatest width 0.246 mm ., width across eyes 0.236 mm., widtll just back of eyes 0.207 mm .; eyes, length 0.123 mm ., width 0.065 mm ., interval 0.105 mm .; prothorax, length 0.198 mm ., width (inclusive of coxe) 0.461 mm . ; pterothorax, length about 0.510 mm ., width 0.458 mm .; abdomen, greatest width 0.534 mm. : tube, length 0.390 mm ., width of base 0.131 $11 m 1$., at apex 0.062 mm .

| Antennal segments | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Width (microns) . | 51 | 42 | 36 | 39 | 36 | 33 | 30 | 22 |
| Length (microns) . | 60 | 84 | 210 | 169 | 141 | 99 | 69 | 64 |

Total length of antenna, $0.86 \mathrm{~mm} . *$
Described from one female taken by Dr. Alex Wetmore of the United States Biological Survey at Punta Gorda, Florida, February 3, 1919, in miscellaneous sweepings.

Readily separable from the North American species of the genus by the long head, the notched frontal costa, and the short, stout tube. The subequal width of prothorax, pterothorax, and abdomen makes the species readily recognizable to the naked eye.

## Notes on Dragonflies (Odonata) from Lee County, Georgia, with a Description of Enallagma dubium, new species.

By Francis Metcalf Root, Department of Medical Zoology,
School of Hygiene and Public Health, the Johns Hopkins University, Baltimore, Maryland.
During the summer of 1923, while working under Dr. S. T. Darling at the malaria research station maintained by the International Health Board at Leesburg, Georgia, I collected a mumber of specimens of Odonata in spare moments. This collection contains enough interesting material to be worthy of record. although in the Anisoptera, especially, only a small fraction of the entire fauna is represented.

Lee County is in the southwestern part of the state of Georgia, approximately one hundred miles from the Gulf Coast and one hundred and fifty miles from the Atlantic Coast. Despite this inland location, the Odonate fauna includes several species which, farther north at least, are usually considered sea-coast forms. Ischnura ramburii, for example, here replaces I. verticalis, and Libellula auripennis and Celithomis ornata are frequent. The same thing is evident in the mosiquito fauna.

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[^0]:    *The length of the antenna as given here is appreciably less than the total to be gotten by adding together the measurements given for the individual segments, because of the oblique truncation of the subapical segments.

